

WHAT IS CLAIMED IS:

1. A music data selection apparatus comprising:
  - at least one of a storage device which has a plurality  
5 of pieces of music data stored thereon and a reading device  
which reads the music data from a storage medium which has  
a plurality of pieces of music data recorded thereon;
  - a setting device which sets a search key as a standard  
of selection of the music data to be reproduced in the case  
10 of selecting the music data to be reproduced from the stored  
plurality of pieces of music data;
  - a detection device which detects at least an appearance  
frequency of an image word included in the music data by each  
piece of the stored music data;
  - 15 an appearance frequency calculation device which  
calculates an overall appearance frequency of the detected  
image word in the stored plurality of pieces of music data  
based on the appearance frequency of the image word included  
in the detected music data, and corrects the appearance  
20 frequency of the image word included in the music data based  
on the calculated overall appearance frequency of the image  
word; and
  - a selection device which selects the music data matching  
with the set search key from the stored music data based on  
25 the set search key and the calculated appearance frequency  
of the image word in the music data.

2. The music data selection apparatus according to claim 1, wherein the appearance frequency calculation device has:

an overall appearance frequency calculation device which calculates an overall appearance frequency of the detected image word in the stored plurality of pieces of music data based on the appearance frequency of the image word included in the detected music data;

an information amount calculation device which calculates an information amount of the detected image word based on the calculated overall appearance frequency; and

a frequency calculation device which calculates and corrects the appearance frequency of the image word against the overall appearance frequency based on the calculated information amount of the image word.

15

3. The music data selection apparatus according to claim 2, wherein the information amount calculation device calculates appearance probability of the image word based on the overall appearance frequency of the detected image word in the stored plurality of pieces of music data, and calculates the information amount of the detected image word based on the calculated appearance probability of the image word.

4. The music data selection apparatus according to claim 3, wherein the information amount calculation device calculates as entropy the information amount of the detected image word calculated based on the appearance probability of

the detected image word.

5. The music data selection apparatus according to claim 1, wherein the detection device performs a thesaurus analysis based on the image word set in advance, and detects the appearance frequency of the image word in the music data by the thesaurus analysis.

6. A music data selection apparatus comprising:  
10 at least one of a storage device which has a plurality of pieces of music data stored thereon and a reading device which reads the music data from a storage medium which has a plurality of pieces of music data stored thereon;

a setting device which sets a search key as a standard  
15 of selection of the music data to be reproduced in the case of selecting the music data to be reproduced from the stored plurality of pieces of music data;

a detection device which detects at least an appearance frequency of an image word included in the music data by each  
20 piece of the stored music data;

a determination information obtaining device which obtains determination information indicating whether or not the stored music data matches with the set search key;

an appearance frequency calculation device which  
25 calculates a correlation value between the set search key and the detected image word based on the obtained determination information and the detected image word of the music data,

and calculates the appearance frequency of the image word included in the music data in the set search key based on the calculated correlation value; and

a selection device which selects the music data matching  
5 with the set search key from the stored music data based on the set search key and the calculated appearance frequency of the image word in the music data.

7. The music data selection apparatus according to claim  
10 6, wherein the determination information obtaining device obtains determination information on the music data selected by the selection device indicating whether or not the selected music data matches with the set search key;

the appearance frequency calculation device calculates  
15 the correlation value based on the obtained determination information and calculates the appearance frequency of the image word included in the music data in the set search key; and

the selection device selects the music data matching  
20 with the set search key from the stored music data based on the set search key and the calculated appearance frequency of the image word in the music data.

8. The music data selection apparatus according to claim  
25 6, wherein, in the case where at least a predetermined number of pieces of the stored music data are selected as the music data to be reproduced by the search key, the appearance

frequency calculation device has:

an overall appearance frequency calculation device which calculates an overall appearance frequency of the detected image word in the selected plurality of pieces of music data based on the obtained determination information;

a standard deviation calculation device which calculates a standard deviation of the detected image word of the calculated overall appearance frequency;

a correlation value calculation device which calculates a correlation value between the search key and the detected image word based on at least the calculated overall appearance frequency and the standard deviation; and

a frequency calculation device which calculates the appearance frequency of the detected image word included in the music data in the set search key based on the calculated correlation value.

9. The music data selection apparatus according to claim 8, wherein, in the case where the determination information obtaining device obtains information on a music data group matching with the search key and the music data group not matching therewith, the overall appearance frequency calculation device and the standard deviation calculation device calculate the overall appearance frequency and the standard deviation by each of the music data group matching with the set search key and the music data group not matching therewith.

10. The music data selection apparatus according to claim 6, wherein the music data selection apparatus comprises a normalization device which normalizes the appearance frequency of the image word included in the music data detected by the detection device, and the correlation value calculation device calculates the correlation value between the search key and the image word based on the appearance frequency of the normalized image word.

10

11. A music data selection method comprising:

a reading process which reads music data from one of a storage device which has a plurality of pieces of music data stored thereon and a storage medium which has a plurality of pieces of music data recorded thereon;

a setting process which sets a search key as a standard of selection of the music data to be reproduced in the case of selecting the music data to be reproduced from the stored plurality of pieces of music data;

a detection process which detects at least an appearance frequency of an image word included in the music data by each piece of the stored music data;

an appearance frequency calculation process which calculates an overall appearance frequency of the detected image word in the stored plurality of pieces of music data based on the appearance frequency of the image word included in the detected music data, and corrects the appearance

frequency of the image word included in the music data based on the calculated overall appearance frequency of the image word; and

5 a selection process which selects the music data matching with the set search key from the stored music data based on the set search key and the calculated appearance frequency of the image word in the music data.

12. A music data selection method comprising:

10 a reading process which reads the music data from one of a storage device which has a plurality of pieces of music data stored thereon and a storage medium which has a plurality of pieces of music data stored thereon;

15 a setting process which sets a search key as a standard of selection of the music data to be reproduced in the case of selecting the music data to be reproduced from the stored plurality of pieces of music data;

20 a detection process which detects at least an appearance frequency of an image word included in the music data by each piece of the stored music data;

a determination information obtaining process which obtains determination information indicating whether or not the stored music data matches with the set search key;

25 an appearance frequency calculation process which calculates a correlation value between the set search key and the detected image word based on the obtained determination information and the detected image word of the music data,

and calculates the appearance frequency of the image word included in the music data in the set search key based on the calculated correlation value; and

5 a selection process which selects the music data matching with the set search key from the stored music data based on the set search key and the calculated appearance frequency of the image word in the music data.

13. An information recording medium on which a music data  
10 selection program is computer-readably recorded, wherein the music data selection program causes a computer to function as:

a reading device which reads music data from one of  
a storage device which has a plurality of pieces of music data  
15 stored thereon and a storage medium which has a plurality of pieces of music data stored thereon;

a setting device which sets a search key as a standard  
of selection of the music data to be reproduced in the case  
of selecting the music data to be reproduced from the stored  
20 plurality of pieces of music data;

a detection device which detects at least an appearance  
frequency of an image word included in the music data by each  
piece of the stored music data;

an appearance frequency calculation device which  
25 calculates an overall appearance frequency of the detected  
image word in the stored plurality of pieces of music data  
based on the appearance frequency of the image word included



in the detected music data, and corrects the appearance frequency of the image word included in the music data based on the calculated overall appearance frequency of the image word; and

5           a selection device which selects the music data matching with the set search key from the stored music data based on the set search key and the calculated appearance frequency of the image word in the music data.

10   14.    An information recording medium on which a music data selection program is computer-readably recorded, wherein the music data selection program causes a computer to function as:

          a reading device which reads music data from one of  
15   a storage device which has a plurality of pieces of music data stored thereon and a storage medium which has a plurality of pieces of music data stored thereon;

          a setting device which sets a search key as a standard of selection of the music data to be reproduced in the case  
20   of selecting the music data to be reproduced from the stored plurality of pieces of music data;

          a detection device which detects at least an appearance frequency of an image word included in the music data by each piece of the stored music data;

25           a determination information obtaining device which obtains determination information indicating whether or not the stored music data matches with the set search key;

an appearance frequency calculation device which calculates a correlation value between the set search key and the detected image word based on the obtained determination information and the detected image word of the music data,  
5 and calculates the appearance frequency of the image word included in the music data in the set search key based on the calculated correlation value; and

a selection device which selects the music data matching with the set search key from the stored music data based on  
10 the set search key and the calculated appearance frequency of the image word in the music data.